

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO. 84-R-0001	CUSTOMER NO. 1080	FORM APPROVED OMB NO. 0579-0036
2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code) NATIONAL JEWISH MEDICAL & RESEARCH CENTER 1400 JACKSON ST., DOLLA DENVER, CO 80206 (303) 398-1432		

# **ANNUAL REPORT OF RESEARCH FACILITY** (TYPE OR PRINT)

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

## FACILITY LOCATIONS(sites)

See Attached Listing

Same AS # 2.

## REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs					0
5. Cats					0
6. Guinea Pigs	83	120			120
7. Hamsters		24	8		32
8. Rabbits	5	65	16		81
9. Non-Human Primates					0
10. Sheep	5				0
11. Pigs					0
12. Other Farm Animals					0
13. Other Animals					0

## ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

NOV - 9 2001

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
(Chief Executive Officer or Legally Responsible Institutional official)

DATE SIGNED

10/31/01

HEADQUARTERS

(AUG 91)

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0003

CUSTOMER NO.  
1195

FORM APPROVED  
OMB NO. 0579-0036

# ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

COLORADO STATE UNIVERSITY  
203 ADMINISTRATION  
FORT COLLINS, CO 80523  
(303) 491-7364

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

## FACILITY LOCATIONS(sites)

See Attached Listing

## REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs	4	136	82		218
5. Cats	203	39	163		202
6. Guinea Pigs		391			391
7. Hamsters		64	60		124
8. Rabbits		186	62		248
9. Non-Human Primates					
10. Sheep		7	433		440
11. Pigs			354		354
12. Other Farm Animals					
Cattle		6	7		13
13. Other Animals					
Horses			32		32
Ferrets		23			23
Marmots			12		12

## ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

## CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL (Chief Executive Officer or Legally Responsible Institutional official)

I certify that the above is true, correct, and complete (7 USC Section 2143).

SIGNA

DATE SIGNED

11/13/01

APHIS (AUG 91)

Technology

HEADQUARTERS

APHIS Form 7023 Site List

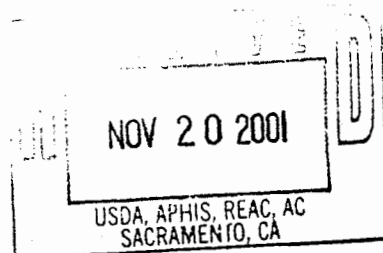
The following sites have been reported by the facility.

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Registration Number: 84-R-0003  
Customer Number: 1195  
Facility: COLORADO STATE UNIVERSITY  
203 ADMINISTRATION  
FORT COLLINS, CO 80523  
(303) 491-7364

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COLORADO STATE UNIVERSITY  
FOOTHILL CAMPUS & VET. TEACHING HOS.  
FORT COLLINS, CO 80523



UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0008

CUSTOMER NO.  
1087

FORM APPROVED  
OMB NO. 0579-0036

## ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

UNIV. OF NORTHERN COLORADO  
PRES.'S OFFICE, CARTER 4000  
DEPT. OF BIOLOGICAL SCIENCES  
GREELEY, CO 80639  
(970) 351-2921

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

### FACILITY LOCATIONS/sites

See Attached Listing

### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs	0				
5. Cats	0				
6. Guinea Pigs	0				
7. Hamsters	0				
8. Rabbits	0				
9. Non-Human Primates	0				
10. Sheep	0				
11. Pigs	0				
12. Other Farm Animals	0				
13. Other Animals					
Siberian Ferrets		7			7
Black-footed ferrets		8			8
	0				

### ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
(Chief Executive Officer or Legally Responsible Institutional official)

DATE SIGNED

11/2/01

**Annual Report Site Listing:**

Customer ID and Site Address:

Cust ID: 1087

Animal Facility

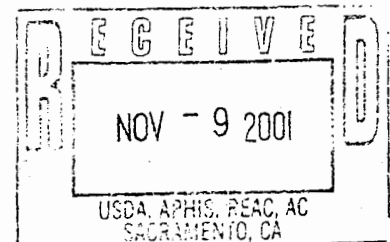
Ross Hall Of Sciences

Greeley, CO 80639

County: Weld

Telephone

(970)351-2921



UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
85-R-0010

CUSTOMER NO.  
1074

FORM APPROVED  
OMB NO. 0579-0036

**ANNUAL REPORT OF RESEARCH FACILITY**  
(TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

CANYON COLORADO EQUID SANCT.  
P.O. BOX 60639  
COLORADO SPGS, CO 80960  
(719) 579-0707

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

FACILITY LOCATIONS(sites)

See Attached Listing

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs					
5. Cats					
6. Guinea Pigs					
7. Hamsters					
8. Rabbits					
9. Non-Human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					
13. Other Animals					
Grevy's Zebra	0	68	1		69
Hartmann Zebra	0	184	30		214
Kulan	0	214	1		215
ASSURANCE STATEMENTS					

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other

Type or Print)

DATE SIGNED

11-15-01

Interagency Report Control No  
0180-DOA-AN

FORM APPROVED  
OMB NO. 0579-0036

CANYON COLORADO EQUID SANCT.  
P.O. BOX 60639  
COLORADO SPGS, CO 80960  
(719) 579-0707

[illegible]

## ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
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Type or Print)

DATE SIGNED

11/15/01

PART 1 - HEADQUARTERS

APHIS Form 7023 Site List

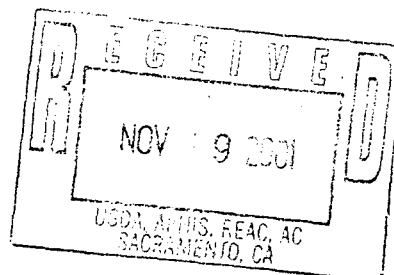
The following sites have been reported by the facility.

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Registration Number: 85-R-0010  
Customer Number: 1074  
Facility: CANYON COLORADO EQUID SANCT.  
P.O. BOX 60639  
COLORADO SPGS, CO 80960  
(719) 579-0707

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CANYON COLORADO EQUID SANCTUARY  
HC 66, BOX 5  
WAGON MOUND, NM 87752





UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0011

CUSTOMER NO.  
1089

FORM APPROVED  
OMB NO. 0579-0036

# ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

WESTERN STATE COLLEGE  
GUNNISON, CO 81231  
(970) 943-2114

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

## FACILITY LOCATIONS/sites

See Attached Listing

Hurst 235B

## REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs					
5. Cats					
6. Guinea Pigs					
7. Hamsters					
8. Rabbits					
9. Non-Human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					
13. Other Animals					
deer mice		108	54		162
meadow voles		11			11
unidentified shrews		1			1

## ASSURANCE STATEMENTS

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- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

NOV - 7 2001

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
(Chief Executive Officer or Legally Responsible Institutional official)

SIGNATURE

DATE SIGNED

10/17/01

APHIS FORM 7023A  
(AUG 2000)

HEADQUARTERS

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0012

CUSTOMER NO.  
1090

FORM APPROVED  
OMB NO. 0579-0036

**ANNUAL REPORT OF RESEARCH FACILITY**  
(TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

COLORADO MOUNTAIN COLLEGE  
3000 COUNTY ROAD 114  
GLENWOOD SPGS, CO 81601  
(970) 945-8691

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

FACILITY LOCATIONS(sites)

See Attached Listing

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS (Cols. C + D + E)
4. Dogs	0	16	0	0	16
5. Cats	0	21	0	0	21
6. Guinea Pigs	0	2	0	0	2
7. Hamsters	0	1	0	0	1
8. Rabbits	0	3	0	0	3
9. Non-Human Primates	0	0	0	0	0
10. Sheep	0	5	0	0	5
11. Pigs	0	3	0	0	3
12. Other Farm Animals CATTLE	0	9	0	0	9
Horses	0	8	0	0	8
13. Other Animals GOATS	0	5	0	0	5
Llamas	0	3	0	0	3
Ferrets	0	2	0	0	2
Chinchilla	0	1	0	0	1

ASSURANCE STATEMENTS

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OCT 15 2001

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL

(Chief Executive Officer or Legally Responsible Institutional official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL

NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)

DATE SIGNED

10/4/01

APHIS Form 7023 Site List

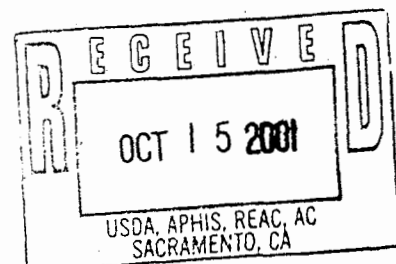
The following sites have been reported by the facility.

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Registration Number: 84-R-0012  
Customer Number: 1090  
Facility: COLORADO MOUNTAIN COLLEGE  
3000 COUNTY ROAD 114  
GLENWOOD SPGS, CO 81601  
(970) 945-8691

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COLORADO MOUNTAIN COLLEGE  
3000 COUNTY ROAD 114  
GLENWOOD SPGS, CO 81601



UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0013

CUSTOMER NO.  
1092

FORM APPROVED  
OMB NO. 0579-0036

# ANNUAL REPORT OF RESEARCH FACILITY

(TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

BEL-REA INST. OF ANIMAL TECH.  
1681 SOUTH DAYTON STREET  
DENVER, CO 80231  
(303) 751-8700

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

## FACILITY LOCATIONS/sites

See Attached Listing

## REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs	3				30
5. Cats	3				30
6. Guinea Pigs	5				50
7. Hamsters	3				30
8. Rabbits	5				50
9. Non-Human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					
cont. 12. Horse	5				50
13. Other Animals					
Mice	40				400
Rats	6				60
Gerbils	4				40

## ASSURANCE STATEMENTS

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(b)(6), (b)(7)(c)

telephone  
Call:  
12/17/01

## CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL

(Chief Executive Officer or Legally Responsible Institutional official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

AL (Type or Print)

DATE SIGNED

11/3/01

PART 1 - HEADQUARTERS

(AUG 91)

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0014

CUSTOMER NO.  
8223

FORM APPROVED  
OMB NO. 0579-0036

**ANNUAL REPORT OF RESEARCH FACILITY**  
(TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

COLORADO COLLEGE  
14 E. CACHE LA POUFRE  
COLORADO SPGS, CO 80903  
(719) 389-6000

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

FACILITY LOCATIONS/sites

See Attached Listing

Barnes Hall - ~~rooms~~ rooms 111 through 137

Palmer Hall rooms 23 34 324

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	0	0	0	0	0
7. Hamsters	0	0	0	0	0
8. Rabbits	0	0	0	0	0
9. Non-Human Primates	0	0	0	0	0
10. Sheep	0	0	0	0	0
11. Pigs	0	0	0	0	0
12. Other Farm Animals	0	0	0	0	0
13. Other Animals	0	0	0	0	0

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL

(Chief Executive Officer or Legally Responsible Institutional official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

SIGNATURE OF CEO OR INSTITUTIONAL OFFICIAL

NAME & TITLE OF CEO OR INSTITUTIONAL OFFICIAL (Type or Print)

DATE SIGNED

11-28-01

APHIS FORM 7023A  
(AUG 91)

(Replaces APHIS FORM 10-23 (Oct 90), which is obsolete)

DEC - 3 2001

USDA, APHIS, PCAD, AC

FOR THE HEADQUARTERS

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO. 84-R-0016	CUSTOMER NO. 1094	FORM APPROVED OMB NO. 0579-0036
2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)  DENVER HEALTH MEDICAL CENTER 777 BANNOCK ST. DENVER, CO 80204		

## ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

FACILITY LOCATIONS/sites

DENVER HEALTH MEDICAL CENTER  
DENVER, CO 80204

### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs					
5. Cats					
6. Guinea Pigs					
7. Hamsters					
8. Rabbits					
9. Non-Human Primates					
10. Sheep					
11. Pigs			32		32
12. Other Farm Animals					
Goats			4		4
13. Other Animals					

### ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

### CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL (Chief Executive Officer or Legally Responsible Institutional official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL	NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)	DATE SIGNED  10/09/2001
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UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0021

CUSTOMER NO.  
8224

FORM APPROVED  
OMB NO. 0579-0036

**ANNUAL REPORT OF RESEARCH FACILITY**  
(TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

FORT LEWIS COLLEGE  
1000 RIM DR.  
DURANGO, CO 81301  
(970) 247-7010

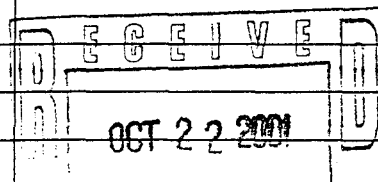
3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

FACILITY LOCATIONS(sites)

See Attached Listing

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs					
5. Cats					
6. Guinea Pigs					
7. Hamsters					
8. Rabbits					
9. Non-Human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					
chickens		12			12
13. Other Animals					
mice	15	30			30



ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
(Chief Executive Officer or Legally Responsible Institutional official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

SI

DATE SIGNED

10/18/01

APHIS Form 7023 Site List

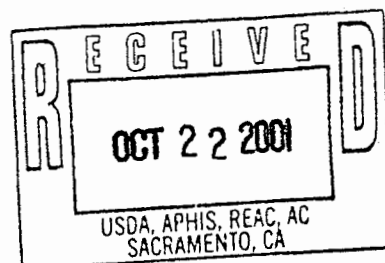
The following sites have been reported by the facility.

---

Registration Number: 84-R-0021  
Customer Number: 8224  
Facility: FORT LEWIS COLLEGE  
1000 RIM DR.  
DURANGO, CO 81301  
(970) 247-7010

---

FORT LEWIS COLLEGE  
758 BERNDT HALL  
DURANGO, CO 81301





UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0024

CUSTOMER NO.  
1095

FORM APPROVED  
OMB NO. 0579-0036

**ANNUAL REPORT OF RESEARCH FACILITY**  
(TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

10810 W. COLLINS AVENUE  
LAKEWOOD, CO 80215  
(800) 644-2623

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

FACILITY LOCATIONS(sites)

See Attached Listing

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs					
5. Cats					
6. Guinea Pigs			0		0
7. Hamsters					
8. Rabbits			3		3
9. Non-Human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL

(Chief Executive Officer or Legally Responsible Institutional official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

DATE SIGNED

12/17/01

ADQUARTERS

APHIS Form 7023 Site List

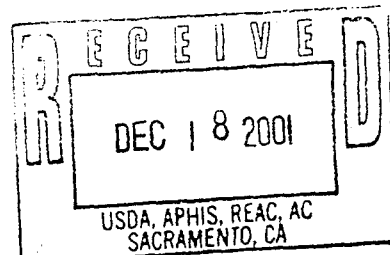
The following sites have been reported by the facility.

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Registration Number: 84-R-0024  
Customer Number: 1095  
Facility: 10810 W. COLLINS AVENUE  
LAKEWOOD, CO 80215  
(800) 644-2623

---

GAMBRO BCT  
10810 W. COLLINS AVENUE  
LAKEWOOD, CO 80215



UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0052

CUSTOMER NO.  
1286

FORM APPROVED  
OMB NO. 0579-0036

## ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

GILEAD SCIENCES  
2860 WILDERNESS PLACE  
BOULDER, CO 80301  
(303) 444-5893

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

### FACILITY LOCATIONS/sites

See Attached Listing

Above location only.

### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs					0
5. Cats					0
6. Guinea Pigs					0
7. Hamsters					0
8. Rabbits					0
9. Non-Human Primates					0
10. Sheep					0
11. Pigs					0
12. Other Farm Animals					0
13. Other Animals					0

### ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
(Chief Executive Officer or Legally Responsible Institutional official)  
I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

it)

DATE SIGNED

9/28/01

PART 1 - HEADQUARTERS

(AUG 91)

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0054

CUSTOMER NO.  
1310

FORM APPROVED  
OMB NO. 0579-0036

**ANNUAL REPORT OF RESEARCH FACILITY**  
(TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

RIBOZYME PHARMACEUTICALS, INC.  
2950 WILDERNESS PLACE  
BOULDER, CO 80301

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

FACILITY LOCATIONS(sites)

RIBOZYME PHARMACEUTICALS, INC.  
BOULDER, CO 80301

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs					
5. Cats					
6. Guinea Pigs					
7. Hamsters					
8. Rabbits					
9. Non-Human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
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- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL

(Chief Executive Officer or Legally Responsible Institutional official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL

NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)

DATE SIGNED

10/24/2001

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0055

CUSTOMER NO.  
1312

FORM APPROVED  
OMB NO. 0579-0036

## ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

HEALTHONE  
1850 HIGH STREET  
DENVER, CO 80218  
(303) 839-6821

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

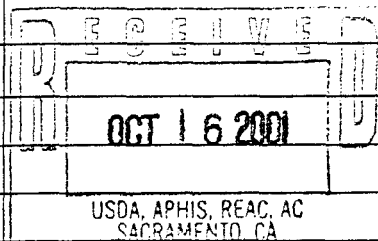
### FACILITY LOCATIONS(sites)

See Attached Listing

HealthONE  
5125 North Stapleton Dr.  
Denver, Colorado 80216

### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs			17		17
5. Cats					
6. Guinea Pigs					
7. Hamsters					
8. Rabbits					
9. Non-Human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					
13. Other Animals					



### ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

### CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL (Chief Executive Officer or Legally Responsible Institutional official)

SIGNA

APHIS  
(AL)

Per Previous Annual Report  
11-8-01

APHIS Form 7023 Site List

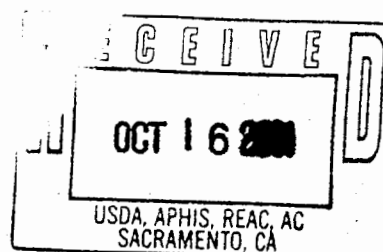
The following sites have been reported by the facility.

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Registration Number: 84-R-0055  
Customer Number: 1312  
Facility: HEALTHONE  
1850 HIGH STREET  
DENVER, CO 80218  
(303) 839-6821

---

HEALTHONE  
5125 NORTH STAPLETON DRIVE  
DENVER, CO 80216



FORM APPROVED  
OMB NO. 0579-0036

UNIVERA PHARMACEUTICALS, INC.  
100 TECHNOLOGY DRIVE, STE. 160  
BROOMFIELD, CO 80021  
(303) 438-8666

FACILITY LOCATIONS(sites)

1) 100 Technology Drive Ste 160  
Broomfield CO 80021

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain-relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS (Cols. C + D + E)
4. Dogs					0
5. Cats					0
6. Guinea Pigs	0	4	0	0	4
7. Hamsters					0
8. Rabbits					0
9. Non-Human Primates					0
10. Sheep					0
11. Pigs					0
12. Other Farm Animals					0
					0
13. Other Animals					0

NOV 23 2001

**ASSURANCE STATEMENTS**

## ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

DATE SIGNED

Agv. 17, 2001

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0057

CUSTOMER NO.  
1783

FORM APPROVED  
OMB NO. 0579-0036

## ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

BOLDER PATH, INC.  
UNIV. OF COLORADO AT BOULDER  
MCDB CAMPUS BOX 347  
BOULDER, CO 80309  
(303) 735-5001

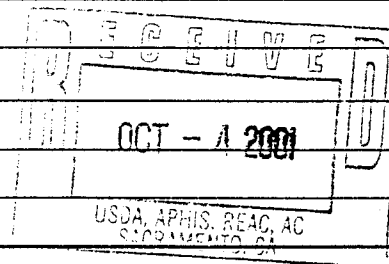
3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

### FACILITY LOCATIONS(sites)

See Attached Listing

### REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs					
5. Cats					
6. Guinea Pigs	10	10	158		168
7. Hamsters					
8. Rabbits					
9. Non-Human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					
13. Other Animals					



### ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions; as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

### CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL (Chief Executive Officer or Legally Responsible Institutional official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

SIGNATURE OF CEO OR INSTITUTIONAL OFFICIAL

NAME & TITLE OF CEO OR INSTITUTIONAL OFFICIAL (Type or Print)

DATE SIGNED

9/25/01



APHIS Form 7023 Site List

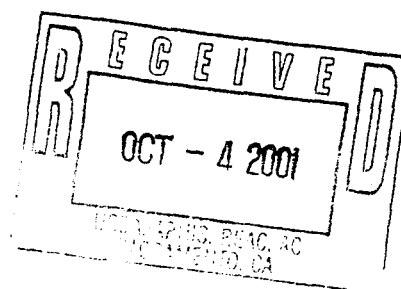
The following sites have been reported by the facility.

---

Registration Number: 84-R-0057  
Customer Number: 1783  
Facility: BOLDER PATH, INC.  
UNIV. OF COLORADO AT BOULDER  
MCDB CAMPUS BOX 347  
BOULDER, CO 80309  
(303) 735-5001

---

BOLDER PATH, INC.  
MCD BIOLOGY  
TRANSGENIC'S ANIMAL FACILITY  
BOULDER, CO 80309



12/14/01

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE  <b>ANNUAL REPORT OF RESEARCH FACILITY</b> (TYPE OR PRINT)	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:33%;">1. REGISTRATION NO. 84-R-0058</td> <td style="width:33%;">CUSTOMER NO. 1784</td> <td style="width:33%;">FORM APPROVED OMB NO. 0579-0036</td> </tr> <tr> <td colspan="3" style="padding: 5px;">                     2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)                      A M C CANCER RESEARCH CENTER                      1600 PIERCE STREET                      LAKEWOOD, CO 80214                      (303) 239-3561                 </td> </tr> </table>	1. REGISTRATION NO. 84-R-0058	CUSTOMER NO. 1784	FORM APPROVED OMB NO. 0579-0036	2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code) A M C CANCER RESEARCH CENTER 1600 PIERCE STREET LAKEWOOD, CO 80214 (303) 239-3561		
1. REGISTRATION NO. 84-R-0058	CUSTOMER NO. 1784	FORM APPROVED OMB NO. 0579-0036					
2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code) A M C CANCER RESEARCH CENTER 1600 PIERCE STREET LAKEWOOD, CO 80214 (303) 239-3561							
3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)							

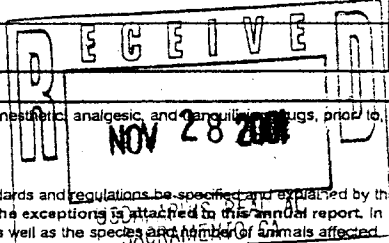
FACILITY LOCATIONS/sites

See Attached Listing

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)					
A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F.  TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs					
5. Cats					
6. Guinea Pigs					
7. Hamsters					
8. Rabbits					
9. Non-Human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					
13. Other Animals					
mice		1211	12		1223
rats		588			588

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all the exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.



<b>CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL</b> (Chief Executive Officer or Legally Responsible Institutional official) I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)	
SIGNATURE	DATE SIGNED  11/27/01

APHIS Form 7023 Site List

The following sites have been reported by the facility.

---

Registration Number: 84-R-0058  
Customer Number: 1784  
Facility: A M C CANCER RESEARCH CENTER  
1600 PIERCE STREET  
LAKEWOOD, CO 80214  
(303) 239-3561

---

AMC CANCER RESEARCH CENTER  
1600 PIERCE STREET  
LAKEWOOD, CO 80214

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0060

CUSTOMER NO.  
1835

FORM APPROVED  
OMB NO. 0579-0036

**ANNUAL REPORT OF RESEARCH FACILITY**  
(TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

UNIVERSITY OF COLORADO-BOULDER  
DEPARTMENT OF ANIMAL RESOURCES  
CB 26  
BOULDER, CO 80309  
(303) 492-2890

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

FACILITY LOCATIONS(sites)

See Attached Listing

*RAMALEY BIOLOGY*

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs					
5. Cats					
6. Guinea Pigs					
7. Hamsters	500		635	0	635
8. Rabbits					
9. Non-Human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					
13. Other Animals					
SPERMOPHILUS- GROUND SQUIRREL	0	0	20	0	20
PEROMYSCUS- DEER MOUSE	0	8	0	0	8

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
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CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
(Chief Executive Officer or Legally Responsible Institutional official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

DATE SIGNED

11/8/01

HEADQUARTERS

(AUG 91)

ANIMAL RESOURCES

NOV 9 2001

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0061

CUSTOMER NO.  
10643

FORM APPROVED  
OMB NO. 0579-0036

**ANNUAL REPORT OF RESEARCH FACILITY**  
(TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

THE VETERINARY REFERRAL CENTER OF COLORADO  
3550 S. JASON ST.  
ENGLEWOOD, CO 80110

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

FACILITY LOCATIONS(sites)

AGENT FOR VETERINARY REFERRAL CENTER OF COLO.  
ENGLEWOOD, CO 80110

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A.  Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F.  TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs		18	6		24
5. Cats					
6. Guinea Pigs					
7. Hamsters					
8. Rabbits					
9. Non-Human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					
13. Other Animals					

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
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CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
(Chief Executive Officer or Legally Responsible Institutional official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL	NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)	DATE SIGNED
		11/26/2001

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. REGISTRATION NO.  
84-R-0062

CUSTOMER NO.  
11855

FORM APPROVED  
OMB NO. 0579-0036

# ANNUAL REPORT OF RESEARCH FACILITY (TYPE OR PRINT)

2. HEADQUARTERS RESEARCH FACILITY (Name and Address, as registered with USDA, include Zip Code)

MESA STATE COLLEGE  
1100 NORTH AVENUE  
GRAND JUNCTION, CO 81501

3. REPORTING FACILITY (List all locations where animals were housed or used in actual research, testing, teaching, or experimentation, or held for these purposes. Attach additional sheets if necessary.)

## FACILITY LOCATIONS(sites)

MESA STATE COLLEGE  
GRAND JUNCTION, CO 81501

## REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY (Attach additional sheets if necessary or use APHIS FORM 7023A)

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not yet used for such purposes.	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, analgesic, or tranquilizing drugs were used.	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. (An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to this report)	F. TOTAL NO. OF ANIMALS  (Cols. C + D + E)
4. Dogs					
5. Cats					
6. Guinea Pigs					
7. Hamsters					
8. Rabbits					
9. Non-Human Primates					
10. Sheep					
11. Pigs					
12. Other Farm Animals					
13. Other Animals					
Deer Mice	75	16			16
White Footed Mice	13				

## ASSURANCE STATEMENTS

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- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

## CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL

(Chief Executive Officer or Legally Responsible Institutional official)

I certify that the above is true, correct, and complete (7 U.S.C. Section 2143)

SIGNATURE OF C.E.O. OR INSTITUTIONAL OFFICIAL

NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL (Type or Print)

DATE SIGNED

11/15/2001

11-14-00

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. CERTIFICATE NUMBER: 84-R-0007  
CUSTOMER NUMBER: 1086

FORM APPROVED  
OMB NO. 0579-0036

ANNUAL REPORT OF RESEARCH FACILITY  
( TYPE OR PRINT )

Colorado Serum Company  
4950 York Street

Telephone:  
(303)295-7527

Denver, CO 80216

3. REPORTING FACILITY ( List all locations where animals were housed or used in actual research, testing, or experimentation, or held for these purposes. Attach additional sheets if necessary )

FACILITY LOCATIONS ( Sites ) - See Attached Listing

OK per Dr. Flynn 11-14-00

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY ( Attach additional sheets if necessary or use APHIS Form 7023A )

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not y	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, a	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. ( An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to	F. TOTAL NUMBER OF ANIMALS  ( COLUMNS C + D + E )
4. Dogs	0	0	0	0	0
5. Cats	0	0	0	0	0
6. Guinea Pigs	26	236	186	1203	1625
7. Hamsters	0	0	0	166	166
8. Rabbits	4	0	170	0	170
9. Non-human Primate					
0. Sheep					
1. Pigs					
2. Other Farm Animals					
3. Other Animals					

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
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- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
( Chief Executive Officer or Legally Responsible Institutional Official )

SIGNATURE	OFFICIAL	NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL ( Type or Print )	DATE SIGNED
			11-6-00

Colorado Serum Company  
License No. 84-R-0007

For FY 1999 – 2000 Annual Report of Registered  
Research Facility – APHIS Form 7023

Each animal in each referenced test was employed in testing a Licensed Veterinary Biological product as required by Federal Regulations as codified in Title 9 CFR. Humane euthanasia of animals on 9 CFR required tests are provided for in Federal Register publication dated August 21, 1995 citing part 117.4(d) – Animals at Licensed Establishments – test animals (filed August 18, 1995) has been initiated and included as standard testing protocol. Attending veterinarians and related employees have been informed and Colorado Serum Company is complying with this regulation.

Explanation of usage of animals listed in Column E.

Line Item 6.

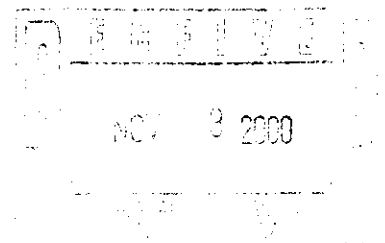
Guinea Pigs

1203 Guinea Pigs were tested causing pain, for which no anesthetic, analgesics, or tranquilizers could be used. A detailed breakdown of guinea pigs by test reference is provided.

9 CFR 113.451(d) Tetanus Antitoxin potency testing – 917 guinea pigs.

9 CFR 113.106(c) Clostridium chauvoei Bacterin potency testing – 198 guinea pigs

9 CFR 113.107(c) Clostridium haemolyticum potency testing – 88 guinea pigs





ATTACHMENT NO. 1

Page 2  
of 1999 - 2000 report

Colorado Serum Company  
License No. 84-R-0007

Line Item 7.

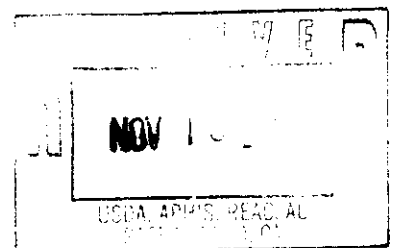
Hamsters

166 Hamsters were tested causing pain, for which no anesthetics, analgesics, or tranquilizers could be used. A detailed breakdown of hamsters by test reference is provided.

9 CFR 113.101	Leptospira Pomona Bacterin potency testing – 40 hamsters.
9 CFR 113.102	Leptospira Icterohaemorrhagiae Bacterin potency testing – 46 hamsters.
9 CFR 113.103	Leptospira Canicola Bacterin potency testing – 40 hamsters.
9 CFR 113.104	Leptospira Grippotyphosa Bacterin potency testing – 40 hamsters.

11-6-00

Date



UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. CERTIFICATE NUMBER: 84-R-0045

CUSTOMER NUMBER: 1096

FORM APPROVED  
OMB NO. 0579-0036

ANNUAL REPORT OF RESEARCH FACILITY  
( TYPE OR PRINT )

Colorado Division Of Wildlife  
6060 Broadway

Denver, CO 80216

Telephone:  
(303)297-1192

3. REPORTING FACILITY ( List all locations where animals were housed or used in actual research, testing, or experimentation, or held for these purposes. Attach additional sheets if necessary )

FACILITY LOCATIONS ( Sites ) - See Attached Listing

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY ( Attach additional sheets if necessary or use APHIS Form 7023A )

A. Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not y	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, a	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. ( An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to	F. TOTAL NUMBER OF ANIMALS  ( COLUMNS C + D + E )
4. Dogs	na				
5. Cats	na				
6. Guinea Pigs	na				
7. Hamsters	na				
8. Rabbits	na				
9. Non-human Primate	na				
0. Sheep	na				
1. Pigs	na				
2. Other Farm Animals					
cattle	-	-	-	11	11
3. Other Animals					
bighorn sheep	33	-	-	6	6
elk	4	19	-	-	19
mule deer	-	29	-	31	60
				55	

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and follo actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
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CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
( Chief Executive Officer or Legally Responsible Institutional Official )

CIAL

NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL ( Type or Print )

DATE SIGNED

11/20/00

-23 (OCT 88), which is obsolete.

( AUG 91 )

FORM APPROVED  
OMB NO 0579-0036

Colorado Division of Wildlife  
6060 Broadway  
Denver CO 80216

[illegible]

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and following actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
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- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care and use.

11

DATE SIGNED

11/20/00

**Annual Report Site Listing:**

Customer ID and Site Address:

Cust ID: 1096

4330 West Laporte  
Avenue  
Fort Collins, CO 80521  
County: Larimer

Telephone  
(970)472-4300

**Column E Addendum**

**Explanation of animal uses involving unmitigated pain or distress**

1. Chronic wasting disease (CWD) pathogenesis: Studies involved 5 mule deer and 7 white-tailed deer orally inoculated with infectious brain material. Handling and experimental procedures themselves were neither painful nor distressing. However, some ill-defined pain sensations and other adverse psychological manifestations may have arisen during the course of the disease [based on extrapolations from human transmissible spongiform encephalopathies (TSEs)]. No veterinary pharmaceuticals or other therapeutic regimens are recommended for treatment of animal TSEs, and it is unclear whether conventional analgesics would even be effective. Moreover, attempting to control elements of disease progression would have interfered with detection of clinical signs, and could alter the pathobiological processes under study. Instead, animals showing signs of severe clinical CWD were euthanized, as specified in study protocols on file.
2. Susceptibility of cattle to CWD: Study involved 26 mule deer and 11 domestic cattle naturally exposed to the CWD agent via confinement in outdoor paddocks where the disease is endemic. Handling and experimental procedures themselves were neither painful nor distressing. However, some ill-defined pain sensations and other adverse psychological manifestations may have arisen in mule deer during the natural course of the disease [based on extrapolations from human transmissible spongiform encephalopathies (TSEs)]. No veterinary pharmaceuticals or other therapeutic regimens are recommended for treatment of animal TSEs, and it is unclear whether conventional analgesics would even be effective. Moreover, attempting to control elements of disease progression would have interfered with detection of clinical signs, and could alter the pathobiological processes under study. Instead, animals showing signs of clinical CWD were euthanized, as specified in study protocols on file. (Note: Based on preliminary data available to date, it is unlikely that the cattle in this study will ever become infected with CWD; however, they are counted in column E of the report as a matter of completeness.)
3. Evaluation of a modified-live *Pasteurella haemolytica* vaccine in bighorn sheep: Study involved 6 bighorn sheep exposed to vaccine and/or pathogenic strains of *Pasteurella haemolytica*. Handling and experimental procedures themselves were neither painful nor distressing. However, some pain or distress may have arisen in bighorns that developed respiratory disease after exposure to vaccine and/or pathogenic strains of *Pasteurella haemolytica*. Attempting to control elements of disease progression with conventional therapeutic regimens prescribed for pneumonic pasteurellosis would have interfered with evaluation of vaccine efficacy, and could have altered the pathobiological processes under study. Instead, animals showing signs of severe respiratory disease were euthanized, as specified in study protocols on file.

UNITED STATES DEPARTMENT OF AGRICULTURE  
ANIMAL AND PLANT HEALTH INSPECTION SERVICE

1. CERTIFICATE NUMBER: 84-R-0059  
CUSTOMER NUMBER: 1834

FORM APPROVED  
OMB NO. 0579-0036

ANNUAL REPORT OF RESEARCH FACILITY  
( TYPE OR PRINT )

University Of Colorado (Hsc)  
4200 E. 9th Avenue, Box A-095

Telephone:  
(303)315-2595

Denver, CO 80262

3. REPORTING FACILITY ( List all locations where animals were housed or used in actual research, testing, or experimentation, or held for these purposes. Attach additional sheets if necessary )

FACILITY LOCATIONS ( Sites ) - See Attached Listing

REPORT OF ANIMALS USED BY OR UNDER CONTROL OF RESEARCH FACILITY ( Attach additional sheets if necessary or use APHIS Form 7023A )

A.  Animals Covered By The Animal Welfare Regulations	B. Number of animals being bred, conditioned, or held for use in teaching, testing, experiments, research, or surgery but not y	C. Number of animals upon which teaching, research, experiments, or tests were conducted involving no pain, distress, or use of pain- relieving drugs.	D. Number of animals upon which experiments, teaching, research, surgery, or tests were conducted involving accompanying pain or distress to the animals and for which appropriate anesthetic, a	E. Number of animals upon which teaching, experiments, research, surgery or tests were conducted involving accompanying pain or distress to the animals and for which the use of appropriate anesthetic, analgesic, or tranquilizing drugs would have adversely affected the procedures, results, or interpretation of the teaching, research, experiments, surgery, or tests. ( An explanation of the procedures producing pain or distress in these animals and the reasons such drugs were not used must be attached to	F.  TOTAL NUMBER OF ANIMALS  ( COLUMNS C + D + E )
4. Dogs			77		77
5. Cats					0
6. Guinea Pigs			143	53	196
7. Hamsters					0
8. Rabbits		25	95	56	176
9. Non-human Primate	102			8	8
0. Sheep			164	16	180
1. Pigs			61		61
2. Other Farm Animals					
3. Other Animals					

ASSURANCE STATEMENTS

- 1) Professionally acceptable standards governing the care, treatment, and use of animals, including appropriate use of anesthetic, analgesic, and tranquilizing drugs, prior to, during, and follow actual research, teaching, testing, surgery, or experimentation were followed by this research facility.
- 2) Each principal investigator has considered alternatives to painful procedures.
- 3) This facility is adhering to the standards and regulations under the Act, and it has required that exceptions to the standards and regulations be specified and explained by the principal investigator and approved by the Institutional Animal Care and Use Committee (IACUC). A summary of all such exceptions is attached to this annual report. In addition to identifying the IACUC-approved exceptions, this summary includes a brief explanation of the exceptions, as well as the species and number of animals affected.
- 4) The attending veterinarian for this research facility has appropriate authority to ensure the provision of adequate veterinary care and to oversee the adequacy of other aspects of animal care.

CERTIFICATION BY HEADQUARTERS RESEARCH FACILITY OFFICIAL  
( Chief Executive Officer or Legally Responsible Institutional Official )

NAME & TITLE OF C.E.O. OR INSTITUTIONAL OFFICIAL ( Type or Print

DATE SIGNED

11/27/00

which is obsolete.

**Annual Report Site Listing:**

Customer ID and Site Address:

Cust ID: 1834

4200 E. 9th Ave.  
Denver, CO 80220  
County: Denver

Telephone  
(303)315-2595



## CATEGORY E STUDIES

### 1. Sheep exposed to heat stress - 16 sheep

#### Description of Procedures:

Pregnant sheep are placed in an environmental chamber that cycles room temperature between 40-40.5 °C for 12-14 hours/day and 35 °C for the remainder of the day from day 33-35 of gestation until day 90-115. Humidity in the chamber is 45-50%. Animals are housed in standard cages with ad lib water and food. For safety, the heating system is equipped with an alarm and automatic cut-off system.

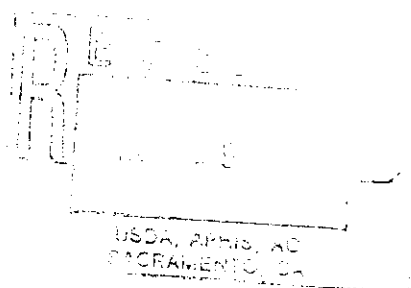
#### Explanation of Reasons Why Pain- or Distress- Reliving Drugs Were Not Used:

The procedure is designed to mimic a naturally occurring phenomenon, namely, pregnancy in hot climates where fetal intrauterine growth retardation is a common problem. The animals in the chamber under these conditions give no visual or clinical indication of stress. They eat and drink normally; their stool pattern is also normal; and their wool continues to grow. The procedure does alter placental development, but since altered placental development is not known to be associated with pain or distress in any species, use of any drug or other treatments would be speculative and possibly problematic for fetal development.

### 2. Rabbits exposed to E. coli - 56 rabbits

#### Description of Procedures:

This is a study of the effects of exposure to bacteria during the birth process. The goal of the protocol is to determine, after intra-cervical inoculation of pregnant rabbits with E. coli and treatment with antibiotics, the extent of tissue damage over time and whether therapeutic intervention with IL-1a reduces fetal injury. Timed pregnant rabbits at 70% gestational age are anesthetized and inoculated intra-cervically with  $10^3$  to  $10^4$  CFU E. coli and treated with ampicillin sulbactam. At 1, 3 and 5 days after inoculation, the animals are euthanized and the tissues evaluated. In another group, rabbits are given IL-1ra or saline each day (iv; ear vein) for 5 hours each day. This study requires an iv drip for 5 hours/day, therefore restraint is needed for the constant infusion. After consultation with the University Veterinarian, a wire rabbit box without neck restraint was chosen. The rabbits are gradually acclimated to this restraint over a 5 day time period. At 1, 3 and 5 days, animal are euthanized and the tissues evaluated.





### Explanation of Reasons Why Pain- or Distress- Reliving Drugs Were Not Used:

It is important to understand the risk of maternal and newborn infection. It is therefore necessary to allow the experiment to continue until it can be determined whether or not the does and neonatal rabbits become infected by exposure to bacteria during the birth process. Antibiotics and IL-1ra treatment given to mothers before delivery may be an effective treatment. The difference in outcome of animals given IL-1ra and those not treated is the focus of these studies. Drugs given to relieve any possible distress would mask the degree of infection and interfere with the immunoassays to be done, therefore none are given.

### **3. Decapitation without prior anesthesia in guinea pigs – 53 guinea pigs**

#### Description of Procedures:

Bradykinin affects many different tissues in the body. For effective drug development, new antagonists must be tested in a standard "classic" assay system. In this protocol, guinea pigs are euthanized by decapitation without prior anesthesia. Segments of the terminal ileum are then removed and hung in a tissue bath. Tissue responses are standardized with bradykinin, and then new potential antagonists are applied to the tissue to see if they block the action of the next standard ED<sub>50</sub> dose of bradykinin applied to the tissue.

### Explanation of Reasons Why Pain- or Distress- Reliving Drugs Were Not Used:

Bradykinin is a peptide hormone involved in causing many serious kinds of inflammation, such as septic shock. The Investigators are developing new, more potent bradykinin antagonists as potential new drugs for these conditions. Isolated guinea pig ileum is the classical standard assay system for bradykinin. In order to compare results with new compounds, they must first be tested in this system. No one has described a more humane procedure that doesn't require anesthesia. Anesthesia adversely affects the response of the tissue. This has been demonstrated in the Investigators' laboratory, as well as in other laboratories. Additionally, the Investigator has tried using carbon dioxide anesthesia and found that the stress caused by this process causes bradykinin to be released in the tissues, such that an adequate baseline cannot be obtained.

### **4. Maternal-Infant separation in non-human primates - 2 mothers and 2 infants (M. nemistrima; for a total of 4 primates)**

#### Description of Procedures:

When infants are 6 months old, mothers are removed from the social group for one separation period that lasts two weeks. During this time the infant is immunized with

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tetanus toxoid and blood is sampled biweekly. The infant remains with its social group during separation.

Explanation of Reasons Why Pain- or Distress- Reliving Drugs Were Not Used:

It is the effect of maternal-infant separation, which is being studied, so any psychoactive intervention to relieve the behavioral impact would negate the results of the study.

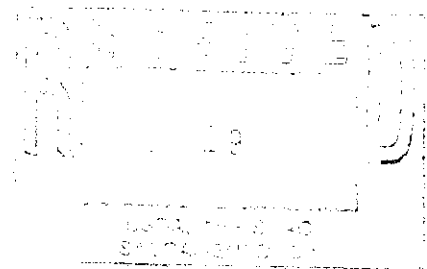
**5. Parkinsonian Syndrome in non-human primates - 4 monkeys (*M. radiata*)**

Description of Procedures:

The Parkinsonian syndrome is induced when MPTP-HCL is infused into the carotid artery to produce a stable unilateral lesion in the monkey. A dose of 0.8 mg/kg MPTP-HCL dissolved in 50 cc of sterile normal saline infused into the carotid artery over 20 minutes leads to unilateral dilation of the pupil and a weak arm and leg contralateral to the side of the lesion and sensory neglect on that side. The animals are infused at a rate of 2 ml/minute using a 30 gauge needle with the infusion in the direction opposite the normal arterial blood flow. Analgesics are given to all animals for any post-operative pain. The result of the surgical procedure is a weak arm and leg and sensory neglect on the side opposite the lesion. (Water bottles are adjusted for this disability.) Thus, once monkeys have been lesioned, abilities such as locomotion, visual fields, grasping, climbing, etc. are impaired. In addition, the lesioned animals are sensitive to sound and have an enhanced startle response. After the lesioning procedure has produced the hemi-parkinsonian effect, each animal is assessed daily for any pain. L-dopa is given as needed to assist the animal in daily routine procedures. In addition, monkey's food intake is carefully assessed and animals are hand fed if necessary until they have learned to adapt to their limitations. Daily fruit, sunflower seed, pomegranate seeds, peanuts, etc., are provided to occupy their foraging behavior. The post transplant state lasts about six to eight months. As the animals become more adept with their routine movements, more foraging materials and additional toys are introduced.

Explanation of Reasons Why Pain- or Distress- Reliving Drugs Were Not Used:

To study the effective treatment of Parkinson's disease, an animal model of the disease is essential. There are currently no effective long-term treatments for this disease and therefore no way to completely eliminate the distress that may be associated with the physical limitations imposed by this disease. It is the goal of this study to test a treatment that may effectively cure the monkeys and, ultimately, human beings.



## EXCEPTIONS TO REGULATIONS

The IACUC has approved an exception to the policy regarding multiple surgeries, specifically the placement of maternal and fetal catheters in sheep. The goal of the protocol is to determine how fetal glucose and plasma insulin availability regulate fetal energy and amino acid metabolism and thereby lead to changes in fetal growth. For the 2-3 week chronic studies, an initial surgery is done to catheterize the mother's femoral artery and vein. The catheters allows the Investigators to produce, by IV infusion, the necessary metabolic conditions (e.g. insulin-induced hypoglycemia; glucose induced hyperglycemia). The fetus is too small to catheterize at this time, and maintaining patency of fetal catheters for more than 2 weeks is very difficult. Thus, a second surgery to place uterine and fetal catheters is done when the fetus is big enough and close enough to final study. The fetal catheters are then used for infusions in both hyperglycemic and hypoglycemic studies. Within the last reporting period, twenty-three- sheep have had multiple surgeries for placement of maternal and fetal catheters.

The USDA Sector Supervisor has approved an exception to the policy regarding multiple survival surgeries, specifically multiple Cesarean sections in Bonnet monkeys (letter dated 6/29/94). There is currently a moratorium on the importation of Bonnet monkeys. Therefore, multiple surgeries will use the fewest possible number of a rare species. No multiple Cesarean sections were performed during this reporting period under this exception. Furthermore, no non-human primates received a Cesarean section in the past year.